

CLAIMS

1. A system for glyph construction comprising:

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a graphics system;

a glyph server means coupled to the graphics system; and

an operating system coupled to the glyph server.

2. The system of claim 1 wherein the glyph server means further comprises

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a line layout core unit receiving glyph codes from the graphics system and determining glyph data descriptions.

3. The system of claim 2 wherein the glyph server means further comprises

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a glyph cache unit coupled to the line layout core unit for receiving the glyph data descriptions and determining if glyph data is in the glyph cache unit.

4. The system of claim 3 wherein the glyph server means further comprises

an open font architecture services unit coupled to the glyph cache unit for permitting support of multiple font file formats.

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5. The system of claim 4 wherein the glyph server means further comprises

at least one scaler unit coupled to the open font architecture unit for receiving

requests from the open font architecture unit and interpreting font data within a font file.

6. The system of claim 5 wherein the glyph server means further comprises a font object management unit coupled to the at least one font scaler and handling requests for the font data.

7. The system of claim 6 wherein the glyph server means further comprises an attribute group support unit coupled to and supporting a data structure for communication among the line layout core unit, the glyph cache unit, the open font architecture services unit, the font scaler unit, and the font object management unit.

8. An apparatus for typographic glyph construction of a line of text in a graphics system running on a computer system and output on an output device of the computer system, the apparatus comprising:

a line layout core unit receiving glyph codes from the graphics system and determining glyph data descriptions;

a glyph cache unit coupled to the line layout core unit for receiving the glyph data descriptions and determining if glyph data is in the glyph cache unit;

an open font architecture services unit coupled to the glyph cache unit for permitting support of multiple font file formats;

at least one scaler unit coupled to the open font architecture unit for receiving requests from the open font architecture unit and interpreting font data within a font file;

5 a font object management unit coupled to the at least one font scaler and handling requests for the font data; and

an attribute group support unit supporting a data structure for communication among the line layout core unit, the glyph cache unit, the open font architecture services unit, the font scaler unit, and the font object management unit.

10 9. The apparatus of claim 8 wherein the line layout core unit further processes a layout of the glyph codes to produce a glyph record array.

10. The apparatus of claim 9 wherein the line layout core unit processes the layout for positional and non-positional adjustments.

15 11. The apparatus of claim 9 wherein the glyph cache unit provides metrics and renderings to update the glyph code array.

20 12. The apparatus of claim 11 wherein the open font architecture services unit further updates the glyph code array with pointers to the glyph renderings.

13. A method for processing a line of text in a graphics system running on a computer system and displaying typographic glyphs on a display device of the computer system, the method comprising:

mapping the input text into glyph codes;

5 forming an initial glyph record array, the initial glyph record array comprising a plurality of glyph records for the glyph codes;

processing a layout of the glyph codes to produce an updated glyph record array;

10 rendering the updated glyph record array to produce a final glyph record array; and

rendering a display of the typographic glyph output from the final glyph record array.

14. The method of claim 13 wherein step of processing further comprises:

15 performing non-positional and positional adjustments to the glyph codes.

15. The method of claim 14 wherein the non-positional adjustments comprise determining reorderings, ligatures, insertions, rearrangements, and non-contextual and contextual substitutions.

16. The method of claim 14 wherein the positional adjustments comprise determining adjustments due to tracking, justification, kerning, baselines, optical edges, and hanging punctuation.

5 17. The method of claim 13 wherein the updated record array comprises glyph data in an order for display and with positioning adjustments for advance widths of the glyph data.

10 18. The method of claim 13 wherein the step of rendering further comprises obtaining advance widths of the glyph data, and obtaining pointers for glyph renderings.